April 6, 2010 8:57:35 AM



Page 1

Item ID:

D206-642-541

Accept



Setup Start



Revision ID:

Replacement Skidtube Item Name:

Start Date:

06/04/2010

Start Oty: 1.00

Req'd Qty: 1.00

10



Cust Item ID: Customer:

Reference:

Approvals: Process Plan:

Required Date: 16/04/2010

QC:

Date:

Tooling: SPC (Y/N): Date:

Date:

Run

Start

Stop



Stop

Sequence ID/ Work Center ID Operation Description

Revision Nbr

Set Up/ Run Hours Draw Number

Plan Draw Rev. Code

Reject Accept Otv Oty

Reject Number

Insp. Stamp

Draw Nbr

D3274 D

IIN-D206-642

Rev M

100

DOCUMENT CONTROL

Memo

0.00

0.00

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

Document Control

Dart Ae	rospace	Ltd					•		- A-
W/O:				WO	RK ORDER CHANGES	S	· · · · · · · · · · · · · · · · · · ·	7/4	4
DATE	STEP		PR	OCEDURE CHAI	CEDURE CHANGE		Date Qty	Approval Chief Eng / Prod Mgr	Approving QC Inspect
Part No					jory:				
	Re	solution:	<u> </u>):			Date: _	
NCR:				WORK ORDE	R NON-CONFORMAN	ICE (NCR)		
DATE	STEP	Description	of NC	<u> </u>	Corrective Action Section		Verification	Approval	Approva
DAIL	SILF	Section		Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspect
			,						
			:					1	

April 6. 2010 8:57:35 AM

Item ID:

D206-642-541

Revision ID:

Item Name:

Replacement Skidtube

Start Date:

06/04/2010

Start Otv: 1.00

Required Date: 16/04/2010 Req'd Oty: 1.00



Accept



Setup Start

Stop



Reference:

Approvals:

OC:

Process Plan: ___ Date:____

Date:

Tooling:

SPC (Y/N):

Cust Item ID:

Customer:

Date:

W 6/4/7

Run Start

Stop



Sequence ID/ **Work Center ID**

110

Skidtubes

Skidtubes

Operation Description

Set Un/ Run Hours

Draw Number

Date:

Draw Rev.

Plan Code

Accept Oty

Reject Otv

Reject Number

Insp. Stamp

Skidtubes

Memo

0.00

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

N 1014/14 1 BE 10/04/14

3- weld fwd cap as per dwg D3274 and OSI004 AR Aluminum Rod Batch: MII2507/M 113 207

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

41014/14

Dart Aerospace	Ltd
----------------	-----

W/O:			WORK ORDER CHANGES									
DATE	STEP		PROC	EDURE CH	IANGE			Ву	Date G		Approval Chief Eng / Prod Mgr	Approval QC Inspector
												_
						,						
Part No	:	Р	AR #: Fault Category: NC					R: Yes I	Date:			
	R	esolution:										
NCR:			W	ORK OR	DER NON-	CONFORM	MANCE	(NCR				
DATE	STEP	Description Section	of NC	Initial Chief Eng	Corrective Actio	Action Se n Description Chief Eng	ection B	Sign & Date	Verific Section		Approval Chief Eng	Approval QC Inspector
		/				Ond Eng		Dute				-
NOTE D		·										

Work Order <i>April 6, 2010, 8:57</i>		362										Page 3	
Revision ID: Item Name: R	0206-642-54 eplacement S 6/04/2010 6/04/2010			Accept	Cust Item I Customer:			:·	Setup	Stop	1 13 3 11 6 1	### ### ##############################	
	Process Pla QC:	n:	Date:	Tooling: SPC (Y/N):		ite:		J	Run	Start Stop			
Sequence ID/ Work Center ID 120 HandFinish Hand Finishing		Operation Description Chemical Conversion Coa Memo	t per QSI005 4.1	Set Up/ Run Hours 0.00	Draw Number	Draw Rev.	Plan Code	Accept Qty	Rej Qty		Reject Number AU	Insp. Stamp	- - !/
QC Quality Control		QC3- Inspect Part Finish Memo		0.00				<u>,</u>		M 10	/ 4/15 		
QC Quality Control		QC5- Inspect part complet	eness to step on W/O	0.00	sloylis			Q					

Dart Aerospace	Ltd
----------------	-----

W/O:		WORK ORDER CHANGES											
DATE	STEP			OCEDURE CHA	NGE	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
				*#									
				** 8									
				24,									
Part No:		P	AR #:	Fault Cate	gory:	NCR: Yes No DQA: Date:							
	Res	olution:		Disposition	n:	QA: N/C CI	osed:		Date: _				
NCR:				WORK ORD	ER NON-CONFORM	ANCE (NCR	3)	7.2.12.2		_			
DATE	STEP	Description Section A	n A Initial		Action Description	tion B Sign &		cation ion C	Approval Chief Eng	Approval QC Inspector			
				Chief Eng	Chief Eng	Date				_			
			W.										
										£ .			
		Z [†]			***************************************				In .	-			
				1 1			1		ĺ				

٠ <u> </u>											
Work Orde April 6, 2010 8.	(d. v. v. v.	362			Page 4						
Item ID: Revision ID: Item Name:	D206-642-54			Accept				S	Setup Sta		
Start Date: Required Date: Reference:	06/04/2010 16/04/2010	Start Qty: 1.00 Req'd Qty: 1.00			Cust Item I Customer:	D:					
Approvals:	Process Pla	ın:	Date:	Tooling:	D	ate:		R	tun Sta	rt	
1887 X 1	QC:		, Date:	SPC (Y/N):	• —	ate:			Sto	,p	
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
		Skidtubes		0.00							r,
Skidtubes		Memo		0.00	·						i
Skidtubes		D3274 2-Deburr creating inside the tu 3-Bond web A/R□□Sika Sikaflex exp Start:□ 10	ossbolt spacer holes as pe	 • >		Yn (<i>9/</i> 4	1/15			;	

QC5- Inspect part completeness to step on W/O

Quality Control

Memo

0.00

Dart Aerospace	Ltd	
----------------	-----	--

· · · · · · · · · · · · · · · · · · ·		- 	-								, e	
W/O:			WORK ORDER CHANGES									
DATE	STEP		PR		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
			ļ 									
•												
Part No	:	P	AR #:	Fault Cat	egory:	NCR:	Yes I	No DQ	A:	Date:		
Resolution:				Dispositi	on:	QA: N/C Closed: Date:						
NCR:				WORK ORI	DER NON-CONFORI	MANCE ((NCR)					
DATE	STEP	Description	of NC	172.	Section B	Cian e Vern			Approval	Approval		
		Section A		Initial Chief Eng	Action Descriptio Chief Eng	n	Date	Secti	ion C	Chief Eng	QC Inspector	
											-	
										,		
<u> </u>							•					
			Acres - co								i	

Item ID:

D206-642-541

Accept



Setup Start



Stop

Stop



Revision ID:

Item Name: Replacement Skidtube

Start Date:

06/04/2010

Start Otv: 1.00

Required Date: 16/04/2010

Reg'd Oty: 1.00



Cust Item ID:

Customer:

Reference:

		_
Ap	prova	als:

OC:

Process Plan:

Date:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start





Sequence ID/ Work Center ID

170



Skidtubes

Skidtubes

Operation Description

Set Up/ Run Hours Draw Number Draw Rev.

Plan Accept Code Qty

Reject Oty

Reject Number Stamp

Insp.

Skidtubes

Memo

0.00

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2 OPEN HOLES TO .297". Deburr

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD END OF TURE

DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES) REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

BE 10-0420



QC5- Inspect part completeness to step on W/O

Memo



Quality Control

Dart Aerospa	ce Ltd
--------------	--------

		— 								•			
W/O:			WORK ORDER CHANGES										
DATE	STEP	7-4-	PRO	OCEDURE CH	IANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
Part No	:	P	AR #:	Fault Ca	tegory:	NCR: Yes	s No DQ	A:	Date: _				
Resolution:		solution:		Disposit	ion:	QA: N/C	Closed:		Date: _				
NCR:			\	WORK OR	DER NON-CONFORM	ANCE (NO	R)			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
DATE	STEP	Description	of NC			tion B	Verifi	cation	Approval	Approval			
	JOIL!	Section /	4	Initial Chief Eng	Action Description Chief Eng	Sign Dat		ion C	Chief Eng	QC Inspector			
										-			
		i			·								
		,	, , , , , , , , , , , , , , , , , , ,		·								
e e													
					·								

Work Order ID 57362

April 6, 2010 8:57:35 AM



Page 6

Item ID:

D206-642-541

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

06/04/2010

Start Qty: 1.00

Required Date: 16/04/2010

Reg'd Otv: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

QC:

Date:

Date:

SPC (Y/N):

Tooling:

Date:

Date:

Run Start

Stop

Sequence ID/ **Work Center ID**

190

Skidtubes Skidtubes

Operation Description

Skidtubes

Set Up/ **Run Hours** Draw Number

Draw Plan Rev. Code

Accept Oty

Reject Qty

Reject Number Stamp

Insp.

Memo

Memo

0.00

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use

aluminum rod

A/R - Aluminum Rod - M/1250 7

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

200

QC5- Inspect part completeness to step on W/O

0.00

Quality Control

•			İ									
Dart Ae	rospace	Ltd									•	
W/O:				W	ORK ORI	DER CHANG	GES					· · · · · · · · · · · · · · · · · · ·
DATE	STEP		PR	OCEDURE CHA	ANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto
					<i>.</i>							
Part No		P	1									
	Re	esolution:	L								Date:	
NCR:				WORK ORD	ER NON	-CONFORM	ANC	E (NCF	₹)			
DATE	0750	Description Section	of NC	Corrective Action Section B			tion B		Verif	ication	Approval	Approva
DATE	STEP		Α .	Initial Chief Eng	Actio	on Description Chief Eng		Sign a	Ser Ser	ction C	Approval Chief Eng	Approva QC Inspecto
												-
						··· <u></u>						ļ
									ļ			

Work Order II April 6, 2010, 8:57:35										Page 7		
Revision ID:	-642-541 cement Skidtube	The second secon	Accept	 				Setup St				
Required Date: 16/04 Reference:				Cust Item II Customer:	D:							
	ess Plan:	Date:			te:				4	. 		
Sequence ID/ Work Center ID 210 QC Quality Control	Operation Description QC10- Inspect visual pe Memo	r QS1004- ground welds	Set Up/ Run Hours 0.00 0.00	Draw Number	Draw Rev.	Plan Code	Accep Qty	t Reject Qty	Reject Number	Insp. Stamp		
220 HandFinish Hand Finishing	Pressure Wash per QS10 Rebeline AS Per Memo	105 4.3 PARTI -042 Z	0.00	104/27				_ Ø		-		
230 Powdercoat Powder Coating	Memo START TIN OVEN TEN) per QSI005 4.3-Alum 4 2 0 7 ME: 10 - 30 AV MPERATURE: 320 9 ME: (() 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.00 0.00 -> Ju	10104	(Z)	f .	_1	_ <i></i>		-		

Dart Aerospac	e Ltd
---------------	-------

	-													
W/O:			WORK ORDER CHANGES											
DATE	STEP		PRO	PROCEDURE CHANGE				Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector			
Part No	•	Р	AR #:	Fault Ca	tegory:	NCI	R: Yes I	No DQ	A:	Date:				
			Disposition:											
NCR:			V	VORK OR	DER NON-CONFORM	IANCE	(NCR)			,			
DATE	STEP	Description	of NC	Corrective Action Section			0: 0	Verific	cation	Approval	Approval			
	O.L.	Section A	<u> </u>	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti	on C	Chief Eng	QC Inspector			
											-			
			<u> </u>			,,				-	·			
*			· I											
					·									
ļ														
							,							
			,											

Work Order ID 57362

April 6, 2010 8:57:35 AM



Page 8

Item ID:

D206-642-541

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date: 06/04/2010

Start Qty: 1.00

Required Date: 16/04/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

Approvals:	
------------	--

QC:

Process Plan:

Date:_____

Date:

Tooling:

SPC (Y/N):

Set Up/

Run Hours

Date: Date: Run

Start



Stop

Sequence ID/ **Work Center ID**

240

Quality Control

Operation Description

QC3- Inspect Part Finish

Memo

0.00

Draw Number Rev.

Draw Plan Code Accept **Qty**

Reject Qty

Reject Insp. Number Stamp

250



Hand Finishing

HandFinishing

Memo

0.00

0.00

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets. A/R \(\text{N/A} \text{LPS-3} \) \(\text{LPS-3} \) \(\text{LPS-3} \)

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a A/R □ □ Sikaflex-291 □ ₩ 1.73 € 1.75 €

Sikaflex expire date:

15/10-4-22

260



Quality Control

QC5- Inspect part completeness to step on W/O

Inspect Nut Plate & Inserts

0.00

0 12/1/23

Memo

Dart Ae	rospace	Ltd									1	
W/O:			WORK ORDER CHANGES									
DATE	STEP		PR	OCEDURE CH	ANGE	Ву		Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
										,		
											1	
Part No: P		AR #:	Fault Cat	NCR: Y	_ Date: _							
			Dispositi	on:	QA: N/C	Clos	ed:		Date: _			
NCR:				WORK ORI	DER NON-CONFORI	MANCE (N	CR)					
DATE	STEP	Description	Description of NC			Section B		Verific	cation	Approval	Approval	
DAIL	SILF	Section /		Initial Chief Eng	Action Descriptio Chief Eng		ın & ate		on C	Chief Eng	QC inspector	
											-	
			ļ									
									,		<u> </u>	

	:												
Work Order ID 5' April 6, 2010 8:57:35 AM	7362										Page		
Item ID: D206-642-Revision ID: Replacement	•		Accept	Setup Star									
Start Date: 06/04/2010 Required Date: 16/04/2010 Reference:	Start Qty: 1.00			Cust Item I Customer:	D;				Stop				
Approvals: Process P	lan:	Date:	Tooling:	Da	ıte:]		Start				
QC:		Date:	_ SPC (Y/N):	Da	ıte:				Stop				
Sequence ID/ Work Center ID 270	Operation Description HAND FINISHING RES	OURCE#1	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp		
Hand Finishing	2-Install ring A/R □ □ Sika Sikaflex exp 3-Inspect fo 4-Spray ins A/R	r foreign objects as per Qi ide of tube on both sides of DPS-3 Batch:	290 2/08 SI 024	· L	L	10-	; H-	C Q	D 2	4			

Quality Control

Memo

QC5- Inspect part completeness to step on W/O

25/20/al @ 00.0

Dart Aerospace Ltd

DATE STEP PROCEDURE CHANGE By Date Qty Approval Chief Eng / Prod Mgr QC Insp.	4
Part No: PAR #: Fault Category: NCR: Yes No DQA: Date:	
Resolution: Disposition: QA: N/C Closed: Date:	
NCR: WORK ORDER NON-CONFORMANCE (NCR)	
DATE STEP Description of NC Corrective Action Section B Verification Approval Approval Approval	oval
Section A Initial Action Description Sign & Section C Chief Eng Ch	

Work Order ID 57362

April 6, 2010 8:57:35 AM



Page 10

Item ID:

D206-642-541

Accept



Setup Start



Revision ID:

Replacement Skidtube **Item Name:**

Start Date:

06/04/2010

Start Qty: 1.00

Required Date: 16/04/2010

Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference:

- Ali	oo	ro	val	s:

Process Plan: _____ Date: ____

Date:_____

Tooling:

Date:

Date:

Run

Start

Stop



Stop

Sequence ID/ Work Center ID

290

Packaging

Operation Description

Identify as per dwg & Stock Location:_____

Set Up/ **Run Hours**

SPC (Y/N):

0.00

Draw Number

Draw Plan Rev. Code

Accept Qty

Reject Qty

Reject Number Stamp

Insp.

Packaging

PPP 57365000

QC21- Final Inspection - Work Order Release

0.00

Quality Control

Memo

0.00

me 10-4-27

300

Dart Ae	rospace L	td							,
W/O:				WO	RK ORDER CHANG	SES			<u> </u>
DATE	STEP		PR	OCEDURE CHAI	NGE	Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto
					!				
Part No):	P	AR #:	Fault Categ	Jory:	NCR: Yes	No DQA:	Date: _	
Resolution:		olution:		Disposition	1:	QA: N/C CI	osed:	Date: _	14-77-1
NCR:				WORK ORDE	R NON-CONFORM	ANCE (NCF	R)		
	De	Description	of NC	Corrective Action Section			Verification	Approval	Ammraura
DATE	STEP		Section A		Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approva QC Inspecto
									-
		ļ							

Picklist Print	•								Page
April 6, 2010 :8:57:39 AM									
Work Order ID: 57362					_				
Parent Item: D206-642-	541				11	• •			V
Parent Item Name: Replac	ement Skidtube		-111);08(8 81111 5(8)6 1121 112	901 Bfill 81881 1181 11	11	S	tart Date:	06/04/2010	Required Date: 16/04/2010
IPP Re IPP Re IPP Re	v:D 07-12-06 replace NA	206-642 Rev. J□K Wearplates & Gask S1515H3L to D36 8 08-015 DD veri	ets JLM□ 572-1 DD				Start Qty:		Required Qty: 1.00
D2600-1-190 Extrusion Round 3" 206	Manufactured	No		110	Each	50.0000	1.0000		
•		Warel	<u>iouse</u>	Lo	c Oty	Loc Code			
	£	Lo	ocation_						
		Main V	Warehouse						
		LC	}		50				. <u> </u>
D3285-1		N-	47575		50			_ \	M 10/4/7
	Manufactured	No	,	110	Each	164.0000			
Cap									
oup g		Warel	r Iouse	Lo	c Oty	Loc Code			
239 1		·	ecation	<u>150</u>	CON	Loc Coue			
		Main V	Varehouse						
N. A. C.		LC	3		164				, /
	\$		47635		15				\$ E 10/04/14
			52511 52647		74				, , , , , , ,
D3282-041	Manufactured	No	32047	150	75 Each	4.0000	1.0000	··	
Float Web (206L/407)	18 i 18 m								
		<u>Wareh</u> <u>Lo</u>	ouse cation	<u>Lo</u>	c Oty	Loc Code			
		Main V	Varehouse						
		LC	ì		4		Mille		A compared to the
			52696		4			- 10.4	n 6/4/15
								S. A. C.	
	•								. 35

Dart Ae	rospace Li	td								
W/O:				WC	RK ORDER CHA	NGES			<u></u>	•
DATE	STEP		PR	OCEDURE CHAI	NGE	E	Зу	Date Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspecto
Part No):	P	AR #:	Fault Cate	gory:	NCR:	Yes N	No DQA:	Date: _	
Resolution:			Disposition	n:	QA: N	/C Clo	sed:	Date: _		
NCR:				WORK ORD	R NON-CONFOR	RMANCE (NCR)			
DATE	OTED	Description of NC			Section B		Verification	Approval	Approva	
DATE	STEP Description Section			Initial Chief Eng	Action Description Chief Eng	ion Sign & Date		Section C	Chief Eng	QC Inspecto
					,					-
			<u> </u> 							
			i i							
						·				
		1								

Picklist Print

April 6, 2010 8:57:39 AM

Page 2

Required Date: 16/04/2010

Required Qty: 1.00

12 DE 10/04/21

12 BE 10/04/21

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

07-02-23 IPP Rev:D

07-12-06

Added SS Wearplates & Gaskets JLM replace NAS1515H3L to D3672-1 DD

IPP Rev:E 08-04-17

as per PAR 08-015 DD verified by:EC

D2649

Manufactured

No

190

Each

Loc Qty

85.0000 120000

Start Date: 06/04/2010

Start Qty: 1.00

Cross Bolt Spacer

Manufactured

No

Warehouse

Warehouse

Location Main Warehouse LG

53453

Location Main Warehouse LG

55000

190

85 Each

85

20.0000

Loc Code

Loc Code

12.0000

Cherry Rivet

Crossbolt Spacer

D3275-1

CR3212-4-03

Purchased

No

Loc Qty

250

Loc Qty

20 20

Each

219.0000 2.0000

Loc Code

Location

Warehouse

Main Warehouse

111359 112314 219 92

127

1. 18 1

a. BL10-4-82,

April 6, 2010 8:57:39 AM

Shop Packet Print

Page 2

Dart Aerospace Ltd	D	art	Aer	osp	ace	Ltd
--------------------	---	-----	-----	-----	-----	-----

	· · · · · · · · · · · · · · · · · · ·											
W/O:			WORK ORDER CHANGES									
DATE	STEP		PR	OCEDURE CH	IANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
					· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·				
										·		
		AR #: Fault Category:				NCR: Yes No DQA: Date:						
Resolution:			Disposit	ion:	QA:	N/C CId	sed:		Date: _			
NCR:				WORK OR	DER NON-CONFO	RMANCE	(NCR)				
DATE	CTED	TEP Description Section A	OT NC			Section B		Verific	cation	Approval	Approval	
DATE	SIEF		\	Initial Chief Eng	Action Descrip	tion	Sign & Date	Secti		Chief Eng	QC Inspector	
											-	
					·							
											, h.	
					^							
l	1		1		l			l l		I	1	

Picklist Print

April 6, 2010 8:57:39 AM

Page 3

Required Date: 16/04/2010

Required Oty: 1.00

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

D3415-041

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM IPP Rev:C 07-02-23

IPP Rev:D 07-12-06

Added SS Wearplates & Gaskets JLM

No

No

IPP Rev:E

replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC

08-04-17

Manufactured

Purchased

250

Each

75.0000 1.0000

Start Date: 06/04/2010

Start Oty: 1.00

Nut Plate

Warehouse Location	Lo	oc Oty	Loc Code	
Main Warehouse				
ST056		75		
33842		75		
	250	Each	726.0000	2.0000
		•		

Cherry Rivet

CCR264SS3-3

Warehouse Location	Loc Qty	Loc Code
Main Warehouse		
ST311	726	
111548	4	
112314	4	
113539	92	
113973	626	

2BL10-4-02

ALS4-1032-130

Purchased

No

Each

40.0000 78.0000

Warehouse	Loc Qty	Loc Code
Location		
Main Warehouse ST282 //4/467	40	
110511	40	

250

78. pl/0-4-22

Dart Aerospace Ltd

	•										
W/O:			 	W	ORK ORDER CHAN	GES	,		, , , , , , , , , , , , , , , , , , , 		:
DATE	STEP		PR	Ву	,	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		
			ļ								
		- Physical Blad			·			··· • • • • • • • • • • • • • • • • • •			
			I I.								
Part No: PA		AR #:	Fault Cate	egory:	NCR: Y	es N	o DQ	A :	Date:		
				Disposition: Q/							
NCR:				WORK ORD	ER NON-CONFORM	IANCE (N	CR)		•		
DATE	STEP Description					Veritics			Approval	Approval	
	Section		\	Initial Chief Eng					on C	Chief Eng	QC Inspector
											-
									:		
									:		
			i								
			 			•			İ		

Picklist Print

April 6, 2010 8:57:39 AM

Page 4

Required Date: 16/04/2010

Required Qty: 1.00

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C 07-02-23 IPP Rev:D

07-12-06

Added SS Wearplates & Gaskets JLM

IPP Rev:E

replace NAS1515H3L to D3672-1 DD 08-04-17 as per PAR 08-015 DD verified by:EC

D3536-15

Manufactured

Manufactured

Manufactured

No

No

No

270

Each

19,0000 1,0000

Start Date: 06/04/2010

Start Qty: 1.00

Gasket

Warehouse	Lo	c Qty	Loc Code		
Location					
Main Warehouse					
FP .		19			
51600		7			BL 10-4-22.
56055		12 .			
•	270	Each	7.0000	1.0000	

Loc Code

11.0000

Loc Code

D3536-23

Gasket

Warehouse Location

Main Warehouse

FP

53468

270

Loc Qty

Each

7

1.0000

D3536-35 Gasket

> Warehouse Loc Qty Location

Main Warehouse

FP

51628

11

11

1 bf 10-4-22

bl 10-4-22

Dart Aerospace Ltd

W/O:				V	ORK ORDER CHA	NGES				•	,
DATE	STEP	7 - 100	PROCEDURE CHANGE				Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
										Frod Wigt	•
 			1								
Part No			AR #:	Fault Ca	tegory:	NCR	NCR: Yes No DQA: Date:				
				Disposition: QA: N/C Closed: D							
NCR:				WORK OR	DER NON-CONFOR	RMANCE	(NCR)			.,
DATE	STEP Description		OI NC			Section B		ation	Approval	Approval	
		Section A	A 	Chief Eng	Chief Eng		Sign & Date	Secti	on C	Chief Eng	QC Inspector
											-
			 - - -					:			
							<u></u>				
			I								
					·						
		·									

Picklist Print

April 6, 2010 8:57:39 AM

Page 5

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23 □ Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C 07-02-23 IPP Rev:D

07-12-06 IPP Rev:E 08-04-17

Added SS Wearplates & Gaskets JLM

replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC

Start Date: 06/04/2010

Required Date: 16/04/2010

Start Qty: 1.00

Required Qty: 1.00

1 bl 10-4-22

Bl 10 - 4-02

D3536-39

Manufactured

No

270

Each

11.0000 1.0000

Gasket

Warehouse	Lo	c Oty	Loc Code	
Location				
Main Warehouse				
FP ./		11		
4816i		1		
51637		10		
	270	Each	14.0000	1.000

D3535-15

Wearshoe

Manufactured No

Manufactured

No

Loc Oty Loc Code

Location

Warehouse

Main Warehouse

FP 56053

14 10

Each

9.0000

1.0000

Wearshoe

D3535-35

Warehouse Loc Qty Loc Code Location

270

Main Warehouse

FP

51608

JBR 10-4-22

Dart	Aerospace	Ltd

W/O:				V	ORK ORDER	CHANGES		 			
DATE	STEP		PROCEDURE CHANGE				Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			 - 								
											7/21-11
Part No							NCR: Yes No DQA: D				
	Resolution:		L							Date:	
NCR:			1	WORK OR	DER NON-CON	IFORMANCI	E (NCR	1)			
DATE	STEP	Description Section	of NC	Corrective Action Initial Action Description Chief Eng Chief Eng		cription	ption Sign &		ation on C	Approval Chief Eng	Approval QC Inspector
											-
											·
					···		1		· · · · · ·		
		ļ									
				·							

Picklist Print

April 6, 2010 8:57:39 AM

Page 6

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

IPP Rev:C 07-02-23 IPP Rev:D

07-12-06

IPP Rev:E 08-04-17

Added SS Wearplates & Gaskets JLM

replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC

Start Date: 06/04/2010

Required Date: 16/04/2010

Start Qty: 1.00

Required Otv: 1.00

D3535-39

Manufactured

No

270

Each

9.0000

1.0000

Wearshoe

Warehouse	Loc C	<u>Oty</u>	Loc Code	
Location				
Main Warehouse				
FP		9		
51619		9		
	270	Each	14.0000	1.0000

D3535-23



Manufactured

No

Warehouse	<u>L</u>	oc Oty	Loc Code	
Location				
Main Warehouse			•	
FP		14		
53467 56054		2		
56054 🗸		12		
	270	Each	20.0000	1.0000

D3537-3

Wearpad

Manufactured

No



Warehouse Location

Loc Qty

Loc Code

Main Warehouse

35697

20

20

1 Bl 10-4-22.

1 Bl 10-4-22

- fl/10-4-22

Dart Ae	rospace	Ltd								,	
W/O:				W	ORK ORDER CH	IANGES		······································			
DATE	STEP		PR	PROCEDURE CHANGE By			Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspect	
			j								
		. ,						· · · · · · · · · · · · · · · · · · ·			
Part No):	P	PAR #:	Fault Cate	egory:	NC	R: Yes	No DQ	A:	Date:	
	Resolution:		Disposition:				: N/C C	losed:		Date: _	
NCR:		٩		WORK ORE	ER NON-CONFO	ORMANCI	E (NCI	R)			
DATE	0750	Description	of NC		Corrective Action	Section B		Verifi	cation	Approval	Approva
DATE	STEP	Section		Initial Chief Eng	Action Descri Chief Eng	ption	Sign Date	& Sect	ion C	Chief Eng	QC inspect
			1								-
			İ								

Required Date: 16/04/2010

Required Qty: 1.00

9 BB10-4-22, 80 BR10-4-22

April 6, 2010, 8:57:39 AM

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM IPP Rev:C 07-02-23

IPP Rev:D 07-12-06

Added SS Wearplates & Gaskets JLM replace NAS1515H3L to D3672-1 DD

as per PAR 08-015 DD verified by:EC IPP Rev:E 08-04-17

D3537-1

Manufactured

No

270

Loc Qty

Each

Loc Code

51.0000 9.0000

Start Date: 06/04/2010

Start Qty: 1.00

Wearpad

Warehouse

Location

Main Warehouse

55465

NAS1149CO332R.

51

0.0000 80.0000

AN960C10L

AN960C416

Purchased #

Purchased

No

Each

51

377.0000 1.0000

washer

Warehouse

Loc Oty

Loc Code

Location

Main Warehouse

ST346

100993

377

377

1 BR 10-4-22

April 6, 2010 8:57:39 AM

Shop Packet Print

Page 7

Dart Ae	rospace	Ltd									, ,
W/O:	• 1	1000		W	ORK ORDER CH	IANGES	·				• •
DATE	DATE STEP			PROCEDURE CHANGE			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approv QC Inspect
Part No):	Р	AR #:	Fault Cat	tegory:	N	ICR: Yes	No DQ	A:	_ Date: _	
	Re	esolution:		Dispositi	ion:		A: N/C C	osed:		Date: _	
NCR:				WORK ORI	DER NON-CONF	ORMANO	CE (NCF	R)			
		Description	of NC		Corrective Action	Section B	,	Vorifie	cation	Approval	Approva
DATE	STEP	Section		Initial Chief Eng	Action Descri Chief Eng	ption	Sign & Date	k Secti		Chief Eng	QC Inspect
											-

P	ic	b	ie	t P	'ni	n	ŧ
1	ĸ	K.	112	ιr	П	ĮĮ.	ι

April 6, 2010 8:57:39 AM

Page 8

Required Date: 16/04/2010

Required Qty: 1.00

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM
IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM□
IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD

IPP Rev:E

08-04-17

as per PAR 08-015 DD verified by:EC

Manufactured

270

Each

1,589.000 2,0000



Start Date: 06/04/2010

Start Qty: 1.00

Phenolic Washer

Warehouse	Loc Oty	Loc Code
Location		
Main Warehouse		
ST077	1589	
47628	89	
51674	500	
52505	1000	
15 15 16 1	270 Each	1,249.000 80.0000

AN3C4A

BOLT

Purchased

No



Warehouse	Loc Oty	Loc Code
Location		
Main Warehouse		
ST350 114336	1249	
113226	248	
114103	501	
114108	500	

80 H10-4-22

April 6, 2010 8:57:39 AM

Shop Packet Print

Page 8

Dart Ae	rospace	Ltd						r				
W/O:	· 1			W	ORK ORDER CH	IANGES				17.70.1		
DATE STEP			PR	OCEDURE CH			Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspect	
Part No):		PAR #:	Fault Cat	egory:	NC	R: Yes	No DQ	A:	Date: _		
	Resolution:		Disposition:			QA	QA: N/C Closed: Date:					
NCR:			<u> </u>	WORK ORE	DER NON-CONF	ORMANCI	(NCF	?)				
DATE	STEP Description Section			Initial Chief Eng	Corrective Action Action Descri		Sign &	Verific Secti		Approval Chief Eng	Approva QC Inspect	
				Oner Eng	Chief Eng		Date				-	

Picklist Print

April 6, 2010 8:57:39 AM

Page 9

Required Date: 16/04/2010

Required Oty: 1.00

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23 □ Revised per D206-642 Rev. J□KJ/JLM IPP Rev:C 07-02-23

IPP Rev:D 07-12-06

Added SS Wearplates & Gaskets JLM replace NAS1515H3L to D3672-1 DD

IPP Rev:E 08-04-17

as per PAR 08-015 DD verified by:EC

AN4C5A

Purchased

Nο

270

Each

534.0000 1.0000

Start Date: 06/04/2010

Start Oty: 1.00

	Warehouse	Loc	Oty	Loc Code	
	Location				
	Main Warehouse				
	ST346		534		
	110552		34		
	112243		500		
No		.270	Each	35.0000	1.0000

D2646

Aft Cap

Manufactured

<u>Warehouse</u>	Loc Oty	Loc Co
Location		
Main Warehouse		
FP6	28	
52663	28	
Main Warehouse		
fp7	7	
52663	7	

1 Bl 10-4-22

Dart Aeros	space	Ltc
W/O·		

W/O:				W	ORK ORDER CHANG	GES				a.
DATE	STEP		PR	OCEDURE CH		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									Frod Wigi	
			<u> </u>							
]		
-										
Part No:		PAR #:	Fault Cate	egory:	NCR: Yes	No DQ	۸:	Date:		
			Disposition: Q							
NCR:				WORK ORD	ER NON-CONFORM	ANCE (NCR)			
5.75	Descriptio	n of NC	of NC Corrective Action Section B				ation	Approval	Approval	
DATE	STEP Section A	STEP Description Section	Initial Chief Eng	Action Description Chief Eng	Sign & Date		Section C		QC Inspector	
										-
···										
		į		1 1						ŀ

Picklist Print

April 6, 2010 8:57:39 AM

Page 10

Required Date: 16/04/2010

Required Qty: 1.00

1 Bl 10-H-22

Work Order ID: 57362

Parent Item:

D206-642-541

Parent Item Name:

Replacement Skidtube

Comments:

IPP Rev:B□05.09.23□Revised per D206-642 Rev. J□KJ/JLM

08-04-17 IPP Rev:E

IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM□

IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD as per PAR 08-015 DD verified by:EC

D3413-1

Manufactured

No

270

Each

31.0000 1.0000

Start Date: 06/04/2010

Start Qty: 1.00

Ring

Warehouse	Loc Oty	Loc Code
Location		
Main Warehouse		
ST473	31	
51586	8	
53446	23	

April 6, 2010 8:57:39 AM

Shop Packet Print

Page 10

Dart	Aerospace	Ltd

W/O:				W	ORK ORDER CHANG	GES				
DATE	STEP		PROCEDURE CHANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
									1 100 1119	
										!
			<u>.</u> Į							
			 		——————————————————————————————————————					
Part No	•	Р	AR #:	Fault Cate	egory:	NCR: Yes	No DQ	A:	Date:	
\		1	Disposition: 0		•	·				
NCR:				WORK ORD	ER NON-CONFORM	ANCE (NCI	R)			
DATE	0750	Description of NC Corrective Action			Section B Verification Approval Approv			Approval		
DATE STEP		Section A		Initial Chief Eng	Action Description Chief Eng	Sign Date	& Secti	ion C	Chief Eng	QC Inspector
										-
		-								
		. 1	•							



DESIG	CP	DRAWN BY	DART AEROSPACE USA, INC.
CHECK	(ED 4	APPROVED 4	DRAWING NO. REV. D
	#	- #	D3274 SHEET 1 OF 4
DATE			TITLE SCALE
06.1	2.19		SKIDTUBE ASSEMBLY NTS
Α		04.03.15	NEW ISSUE
В		04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76
С		05.03.16	ADD -043; NEW INSERTS
D		06.12.19	NEW INSERTS, SS WEARSHOE + GASKET

B810-04

Qty -041	Qty -043	Part Number	Description	.
Х		D3274-041	SKIDTUBE ASSEMBLY] .
	X	D3274-043	SKIDTUBE ASSEMBLY]
1	1	D2600-1-240	EXTRUSION	SHOP COPY
1	1	D2646	AFT CAP	RETURN TO
12	12	D2649	CROSS BOLT SPACER	ENGINEERING
12	37	D3275-1	CROSS BOLT SPACER LING	ONTROLLED (
1	1	D3282-041		
1	1	D3285-1	CAP	ECT TO AMENDA
1	1	D3413-1	RING	VITHOUT NOTICE
1	1	D3415-041	NUT PLATE	WORK ORDER
1	1	D3535-15	WEARSHOE NO	57360
1	1	D3535-23	WEARSHOE	
1	1	D3535-35	WEARSHOE	asio
1	1	D3535-39	WEARSHOE	
1	1	D3536-15	GASKET] '
1	1	D3536-23	GASKET	
1	1	D3536-35	GASKET	
1	1	D3536-39	GASKET]
9	9	D3537-1	WEARPAD	
1	1	D3537-3	WEARPAD]
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)	1
80	80	AN3C4A	BOLT]
1	1	AN4C5A	BOLT] [
1	1	AN960C416	WASHER] [
80	80	AN960C10L	WASHER]
2	2	CCR264SS3-3	RIVET]
2	2	CR3212-4-03	RIVET] [
2	2	NAS1515H3L	WASHER	

GENERAL NOTES:

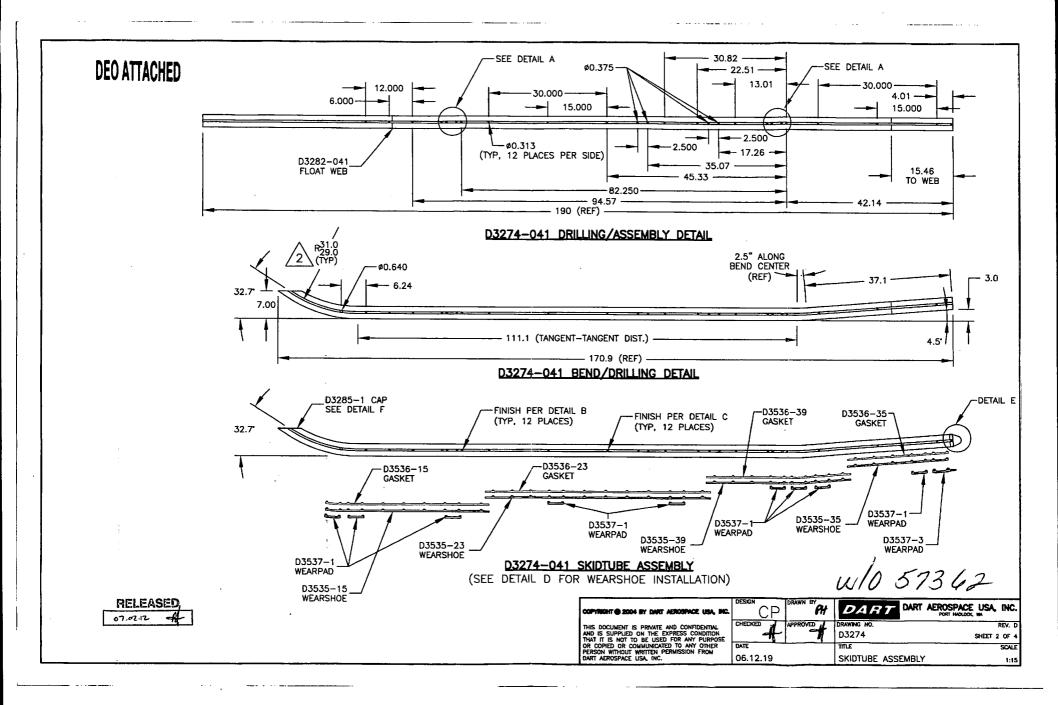
- 1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2. DAMAGE TOLERANCE ON FWD BEND:

THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE

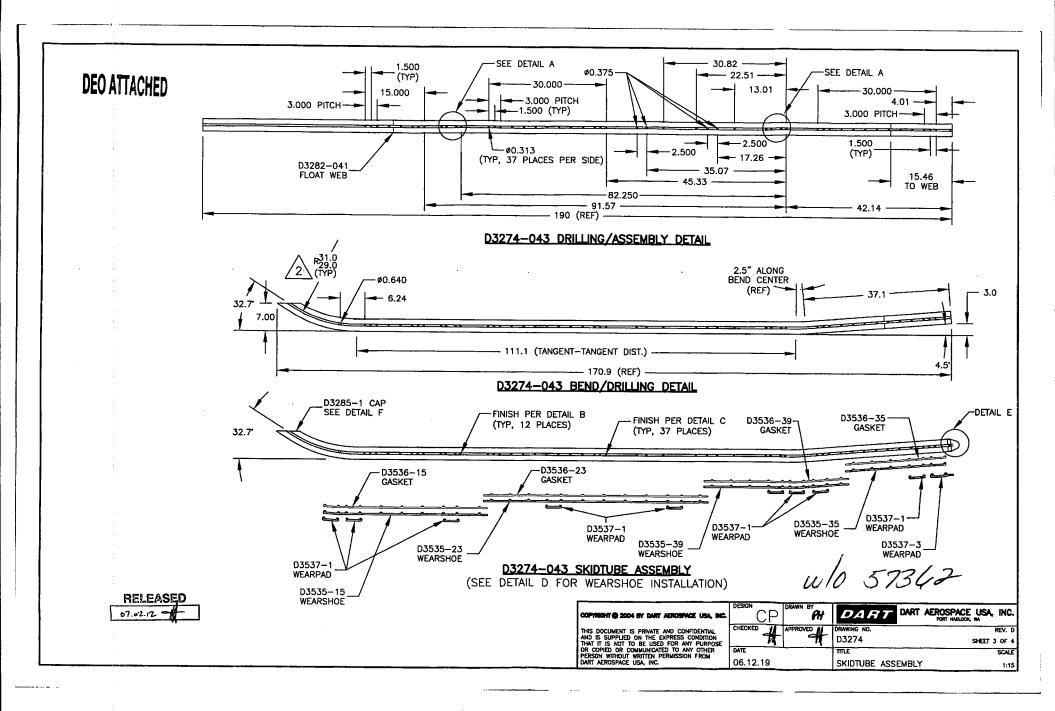
- 3. ALL HOLES DRILLED ON CENTERLINES.
- 4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
- 5. WELDING TO BE DONE PER DART QSI 004.
- 6. FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
- 7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
- 8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

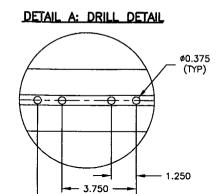
Copyright @ 2004 by DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.



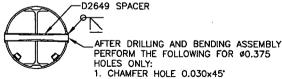
asis.





5.000

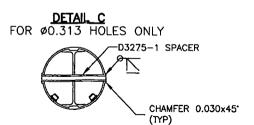
DETAIL B FOR Ø0.375 HOLES ONLY

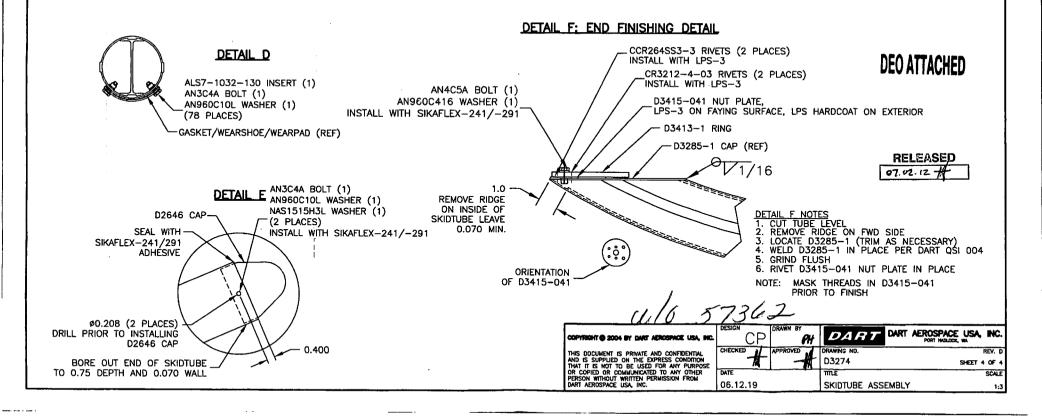


1. CHAMFER HOLE 0.030x45

3. WELD INTO PLACE AND GRIND FLUSH

4. C'BORE TO Ø0.313x0.75 DEEP





DRAWING NO.	TITLE	REV. D DART AEROSPACE USA, II	VC D.E.O. NO.	SHEET NO.	SCALE
D3274	SKIDTUBE ASSEMBLY	ENGINEERING ORDER	D3274-D-1	SHEET 1 OF 1	NTS
DRAWN (CHECKED	MFG. APPR.	APPROVED A	DE APPR.	
DATE 09.06	.17 DATE 09.06	23 DATE 59/06/23	DATE 09/06/25	DATE 09.06.23	

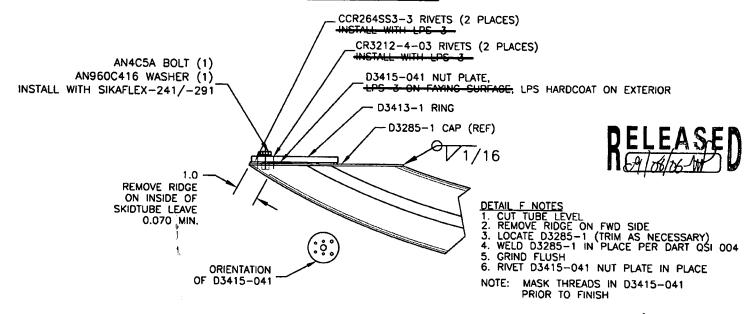
LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.

COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



w/o 57342

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DATA TENDSPACE USA.

NO. 323

AWS D17.1.2001 QUALIFICATION TEST RECORD

Name: Parclas Fllott
Job number: 18 55777
Part number: 0206-642-441
Description: 200 skid tube
Welding Process: Tig[/ Mig[]
Base materiel: Aluminian
Current: AC[]

TEST REQUIREMENTS AND RESULTS

Visual: Penetration:	$pass[\int]$ fail[] $pass[\int]$ fail[]
<u>UNACCEPTABLE</u>	
Cracks: Undercut: Pin holes: Overlap (cold lap) Porosity (surface): Coloration:	pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[] pass[] fail[]
Qualifier Lat Sal Welder Borchafelliget	Date of Test Coupon 10.02.16 Date of Test Coupon 10-02-16

The above named individual is qualified in accordance with AWS D17.1.2001 to weld